The Report Committee for Shontell Smith
Certifies that this is the approved version of the following Report:

Exploring the Relationship between Implicit Bias, Cultural Competency, and Racial Disproportionality in School Discipline

APPROVED BY
SUPERVISING COMMITTEE:

David Klingbeil, Supervisor

Delida Sanchez

Exploring the Relationship between Implicit Bias, Cultural Competency, and Racial Disproportionality in School Discipline

by

Shontell Smith

Report

Presented to the Faculty of the Graduate School of

The University of Texas at Austin

in Partial Fulfillment

of the Requirements

for the Degree of

Master of Arts

The University of Texas at Austin

May 2020

Abstract

Exploring the Relationship between Implicit Bias, Cultural Competency, and Racial Disproportionality in School Discipline

Shontell Smith, M.A.

The University of Texas at Austin, 2020

Supervisor: David Klingbeil

Research highlights the pervasiveness of racial disproportionality in school disciplinary practices. Moreover, researchers have theorized that racial implicit bias plays a role in this disparate treatment; yet, there is a lack of empirical evidence to support this relationship. Even still, schools and researchers have suggested cultural competency training as a way of addressing implicit bias to reduce disproportionality in discipline rates. This proposed study seeks to, first, quantify the relationship between racial implicit bias and the disciplinary actions take by teachers, and second examine whether teachers' self-reported multicultural competency moderates this expected relationship. Analyses will be conducted using linear regression.

Table of Contents

List of Tables

List of Figures

Introduction

In 1954, the *Brown v Board of Education* ruling declared the racial segregation of schools unconstitutional. In many respects, this ruling is considered a victory. Prior to this decision, racial/ethnic minorities, comprised primarily of Black students, faced abysmal learning conditions and great disparities in educational and occupational trajectories (Darling-Hammond, Williamson, & Hyler, 2007). While *Brown v Board of Education (1954),* literally and figuratively, opened the door for more educational opportunities, it did not specifically address discrepant practices in the ways that Black children were educated and treated in schools- thus, creating an environment "in which the possibility of educational access and opportunity seems increasingly (and even intentionally) elusive, even as..."common sense" is that schooling is *the* sure pathway to improved life chances" (Dumas, 2013, p. 3). Indeed, the schooling experience for Black students has been less than ideal. Even as percentages of Black high school and college graduates increases over the years, there is still consistent evidence documenting educational inequities on the basis of race. Black students are often over-identified for special education services and under-identified for gifted education services (Artiles, Kozleski, Trent, Osher, & Ortiz, 2010). There is also a gap between Black and White students' performance on state standardized tests, with data indicating no significant change in the gap between Black and White students' scores between 2008 and 2012 (National Assessment of Educational Progress [NAEP], 2012). Furthermore, schools serving predominantly Black students often receive fewer financial resources, employ

less experienced teachers, and offer less rigorous courses (Darling-Hammond, Williamson, & Hyler, 2007).

Conceptually linked to each of these educational experiences is the disparate disciplining of Black students in schools. Decades of research has shown that Black students are subjected to higher rates of discipline and tend to receive more severe consequences than their White peers when engaging in the same behaviors (Huang, 2018; Mizel, Miles, Pedersen, Tucker, Ewing, & D'Amico, 2016; Fabelo, Thompson, Plotkin, Carmichael, Marchbanks III, & Booth, 2011). The problem with this is not solely that Black students are overrepresented in school disciplinary data. Rather, the increased exposure to school discipline places Black students at a greater risk for negative life outcomes. Often discussed is the school-to-prison pipeline, which describes the relationship between involvement with school discipline and exposure to the criminal justice system. Studies have shown that increased involvement with exclusionary discipline increased likelihood of contact with the juvenile justice system amongst middle and high school students (Fabelo et al., 2011). While exclusionary discipline has been shown to increase dropout rates amongst Black, White, and Hispanic, it has been shown to directly and indirectly, via the relationship with school drop-out, increase the likelihood of adult criminality in Black youth (Pesta, 2018). Moreover, this pathway from school discipline to poorer life trajectories reinforces stereotypes and the racist narrative of Black inferiority. Yet, critical to this conversation is the ways in which racialized views may serve as an antecedent to the increased exposure of Black students to school discipline. The punitive response to Black students' behaviors in schools parallels the

over-policing of Black people during slavery and the era of Jim Crow, which was driven by racialized beliefs that Black people were threatening, violent, and need to be controlled (Wun, 2016; Carter, Skiba, Arredondo, & Pollock, 2013). However, when asked about their discipline practices, it is likely the responses from most individuals working in schools would not explicitly reflect these racist viewpoints. For one, there is mainstream acceptance of color-blind ideology, or the tendency to minimize the role of race in societal interactions and inequities. This ideology often leads to avoidance around conversations of race, relying upon non-racial explanations to explain race-related problems (Bonilla-Silva, 2015). Yet another reason that school staff would likely not outright proclaim that their discipline practices to be racist is these messages are embedded in their unconsciousness as implicit bias.

Implicit bias has received increased attention within educational research as a potential predictor of disparate disciplinary experiences (Staats, 2016; Rudd, 2014). Researchers have outlined the historical basis for and made inferences about the role that implicit bias plays in the racialized experiences of Black students in schools. However, the literature lacks a quantitative description of the association between implicit bias and the discipline rates within schools. If quantitative analyses indicate a significant effect of implicit bias on racial disproportionality in schools, it provides a key, measurable construct for intervention. Since evidence indicates that implicit biases are not easily changed, it becomes important to identify strategies to indirectly adjust the effect of implicit bias on discipline practices. A commonly proposed solution for this relationship is increased cultural competence. Indeed, inherent within cultural competence is an

increased awareness of personal biases (Sue, Arredondo, & McDavis, 1992). Yet, more needs to be known about the way cultural competence interacts with racial implicit bias to influence school disciplinary practices. Therefore, this proposed study seeks to quantitatively assess the relationship of racial implicit bias and school disciplinary practices and to determine whether a commonly proposed solution, cultural competence, impacts the effect of implicit bias on this relationship.

Integrative Analysis

Defining and Measuring Disproportionality

For decades, researchers have been invested in understanding the descriptive factors that positively and negatively shape the academic environment students encounter. One such characteristic is the issue of disproportionality. Disproportionality exists whenever the presence of one group within an educational category greatly exceeds, resulting in over-representation, or fails to meet, resulting in under-representation, what is expected of that group, either in comparison to that group's presence within the general population or in comparison to other groups within that educational category (Skiba, Simmons, Ritter, Gibb, Rausch, Cuadrado, & Chung, 2008). Discussions about disproportionality gained prominence within the special education literature, which consistently documented the over-representation of students of color identified with learning disabilities and emotional disorders, as well as their under-representation within gifted and talented programs (Shealey, McHatton, & Wilson, 2011). Researchers have extended the study of disproportionality to school disciplinary

practices, attempting to characterize disparities in the way students are suspended, expelled, and referred to school administration for their problem behaviors. Evidence has shown that disproportionality exists along gender and socioeconomic lines, with boys and students from low-income families being disciplined at higher rates in school. However, most of the literature on disproportionality has evidenced the presence of racial/ethnic disparities in the way students are disciplined. Specifically, consistent findings have shown that African American students are most likely to be over-represented in data documenting punitive disciplinary decisions in schools.

Due to the years of research on this topic, the construct of disproportionality is well-established. However, researchers have yet to settle on a standard method for calculating disproportionality, resulting in multiple indices to measure the same problem (Girvan, McIntosh, & Smolkowski, 2019; Bollmer, Bethel, Munk & Bitterman, 2014). For example, composition indices were once commonly used to describe trends in disproportionality. Composition indices answer the question: "How many students who experienced a specific disciplinary action were from the target racial/ethnic category?". Composition indices for the target racial/ethnic group are either compared to composition indices of the target racial/ethnic group within the general student population or they are compared to the composition index for a comparison racial/ethnic group who experienced the same disciplinary action (Bollmer et al., 2014; Bollmer, Bethel, Garrison-Mogren, & Brauen, 2007). Currently, risk-based metrics, which rely upon risk indices, dominate the literature on disproportionality. Risk indices evaluate the proportion of students from a

specific racial/ethnic group that experienced a specific disciplinary action, as shown in Equation 1.

$$\text{Risk Index}_{\text{Target Group}} = (\#\text{ of Target Students Receiving Discipline}) \div (\text{Total \# of Target Students}) \quad (1)$$

Risk ratios are the most commonly used risk-based metric (Girvan et al., 2019). In fact, the Department of Education requires schools to report risk ratios in order to evaluate disproportionality in special education identification and the discipline rates of students with disabilities (Bollmer et al., 2014). Risk ratios are calculated by dividing the risk index of a target group by the risk index of reference group, as shown in Equation 2.

$$\text{Risk Ratio}_{\text{Target-Comparison}} = (\text{Risk Index}_{\text{Target Group}}) \div (\text{Risk Index}_{\text{Comparison Group}}) \quad (2)$$

Risk ratios are considered easy to interpret, with values higher than 1.00 indicating greater risk for the target group, values lower than 1.00 indicating greater risk for the comparison group, and values equaling 1.00 indicating no difference between the two groups. However, there are various limitations that must be considered when using a risk ratio. First, risk ratios do not account for magnitude differences between risk indices, meaning "schools with the same risk ratio can have very different overall levels of discipline" (Girvan et al., 2019, p. 44). Additionally, risk ratios cannot be calculated for situations where the risk index for the comparison group equals zero. Furthermore, risk ratios become more sensitive to change as the number of students in either the comparison group or target group decreases. Bollmer et al. (2007) recommended a minimum number of 10 students in the target and comparison group, in order to calculate

a risk ratio. In situations where this minimum is not met, alternate risk ratios could be calculated using a comparison group based on the demographics of the population that the target group is nested within. For example, an alternative risk ratio could be calculated by dividing the risk index of the target-group at the district-level by the risk index of the comparison group at the state-level (Bollmer et al., 2014; Bollmer et al., 2007). Other types of risk-based metrics include risk differences, which are calculated by subtracting the risk index of the reference group from the risk index of the target group, and standardized-risk differences (or probit d' effect sizes), which calculate the difference between risk indices after they have been transformed into z-scores (Girvan et al., 2019) . Although calculated differently, correlation data shows that risk differences provide statistically similar information to risk ratios. Standardized-risk differences have the benefit of allowing for comparisons of disproportionality across samples with different discipline rates; however, they are rarely used practically or empirically, likely due to the complex calculation. Furthermore, probit d' effect sizes are not outcome-oriented, and thus, not intuitively interpretable (Girvan et al., 2019).

The measurement of disproportionality is further complicated by the lack of accordance on how to select a comparison group. For example, when evaluating disproportionality in suspensions of Black students, should White students or all non-Black students serve as the comparison group? Many researchers situate White students as the comparison group. However, other arguments favor the use of all students that are outside of the target race/ethnicity to serve as the comparison group (Bollmer et al., 2014). In fact, the IDEA Data Accountability Center requires that the comparison group

consists of all students not included in the target group. Boneshefski and Runge (2014) recommend that researchers use the focus of their investigation to determine the composition of their comparison group. Statistically, the overrepresentation of Black students in school disciplinary data has persisted regardless of the racial/ethnic composition of the comparison group; although the magnitude of this overrepresentation may be impacted by contextual factors (Bollmer et al., 2014; Kozleski, 2005). Yet, when identifying what constitutes disproportionality, the field does not have a standard for evaluating the severity of the metrics. So while a risk ratio exceeding 1.0 indicates disproportionate representation of the target group, there lacks a clear method for evaluating the value a risk ratio much exceed in order to be considered concerning. Girvan et al. (2019) highlight this as a specific concern for intervention identification; since local education agencies (LEAs) are often operating with minimal financial resources, it is critical that they allocate resources to the schools most in need. Therefore, valid thresholds will allow school districts to effectively evaluate disproportionality data and better prioritize schools in need of support with their discipline. Given the lack of thresholds for interpreting risk ratios, Girvan et al. (2019) recommended the use of a promising metric, the raw differential representation (RDR), for triaging how to allocate resources. The RDR represents the estimated number of students in the target racial/ethnic group that experienced exclusionary discipline, but would not have if they experienced discipline at the same rate as students in the comparison group (Girvan et al., 2019). This metric is easily interpretable and considered to be conceptually aligned to social justice aims of evaluating disproportionality because the information it provides

speaks to the extent to which disproportionality negatively impacts students (Girvan et al., 2019). Additionally, the RDR has demonstrated stability over time and is moderately correlated with risk ratios, risk differences, and discipline rates. Furthermore, RDR can be used to compare the magnitude of disproportionality for situations within schools where the underlying base rates are drastically different or expected to change (Girvan et al., 2019). However, since it is not scaled to the enrollment of schools, it is not well suited as a comparative metric between schools with significantly different enrollment rates (Girvan et al., 2019).

Office Discipline Referrals

To quantify school disciplinary practices, researchers are primarily interested in understanding the degree to which students are subjected to exclusionary actions, or the disciplinary decisions that remove students from their learning environment. Exclusionary discipline includes in-school suspension (ISS), out-of-school suspension (OSS), out-of-school placement, and expulsion. Since office disciplinary referrals, or ODRs, usually precede the issuance of these consequences, researchers often use ODR data to quantify students' encounters with school discipline. Office discipline referrals are a method for monitoring and managing misbehavior in a school and an indicator of individual student behavior and overall school discipline systems (Sugai, Sprague, Horner, and Walker, 2000). They can be written by any staff member and function as an opportunity for school administration to intervene in instances of severe misbehavior or when all other behavior management options have been exhausted (Kennedy-Lewis, 2014; Sugai et al., 2000). Researchers find ODRs to be a useful metric because of its

availability, since most schools collect this information (McIntosh, Campbell, Carter, and Zumbo, 2009; Sugai et al., 2000). Additionally, ODRs provide an opportunity to gather information on low-frequency, high-intensity behaviors that will be less likely to be captured via direct observation (McIntosh et al., 2009). ODRs have demonstrated utility as an index for identifying classrooms or students in need of targeted intervention (Putnam, Luiselli, Handler, & Jefferson, 2003). Furthermore, using established cut points for the frequency of ODRs has some support as an index for identifying the level of behavioral support students may need (McIntosh et al., 2009). Moreover, ODRs have been established as a valid indicator of individual student behavior and overall school discipline systems. Pas, Bradshaw, and Mitchell (2011) presented evidence of convergent and divergent validity of ODRs generated through teacher-reports and the online ODR data management system, the School-Wide Information System, or SWIS. Their findings indicated that both sources of ODR data had significant, positive correlations with the disruptive behavior and concentration problems subscales and significant, negative correlations with the prosocial behavior subscale of the Teacher Observation of Classroom Adaptation-Checklist. ODRs have also been found to be significantly correlated with suspensions and scores on the Externalizing subscale of the Behavior Assessment Scale for Children-2nd Edition, BASC-2, Teacher Report Scale- Child Form (McIntosh et al., 2009). Irvin, Tobin, Sprague, Sugai, and Vincent (2004) presented validity evidence for ODRs utilizing Messick's unified approach for validity, which evaluates the traditional psychometric approaches to construct validity while also examining the intended and unintended consequences of using ODRs from an ethical,

moral, social and educational standpoint. Their findings summarized that higher levels of ODRs were associated with higher levels of problematic school behavioral climates, in areas including general student misbehavior, school attendance, the prevalence of juvenile delinquency and behavioral disorders, and classroom orderliness. Additionally, the authors found ODRs to be a valid means for assessing "(a) school-wide behavioral climate (b) the effectiveness of school-wide behavioral intervention programs, and (c) differing needs across schools in developing positive behavioral environments" (Irvin et al., 2004, p. 143).

While ODR frequency data most often forms the basis for evaluating school discipline, ODRs also capture important contextual information that helps to further conceptualize school discipline environments and disproportionality. Common information included on ODR forms include the date, time, and location of the incident, information about the individuals involved, specifically the referring staff member and referred student(s), and information about the student's misbehavior. These data could be used in various ways to inform researchers and school administrators about the nature of school's behavioral climate (Nishioka, Shigeoka, and Lolich, 2017). For example, Anyon, Lechuga, Ortega, Downing, Greer, and Simmons (2018) examined whether disproportionality was impacted by the location of discipline incidents included on ODRs. Pas et al. (2016) assessed ODR frequency data by classroom to determine which teacher needed additional behavioral management support. The literature has heavily relied upon information about the types of behavioral incidents that lead to the issuance of an ODR. Usually, ODR forms include a checklist or method for indicating a category

that best describes the student's misbehavior. Referral categories function as a framework for school staff, indicating the types of behaviors that warrant punitive disciplinary action. Common referral categories include disruption, defiance, truancy, and fighting (Kennedy-Lewis, 2014; McIntosh et al., 2009). For schools that utilize the SWIS program, ODR categories are operationalized as major or minor behavior problems. However, researchers often create their own analysis categories, driven by the desired inferences of their investigation, to help further explain patterns of ODR frequencies. For example, Kaufman et al. (2010) utilized previous research and a developmental model for problem behaviors to group 27 ODR categories within their study into four categories for analysis: attendance, delinquent, aggressive and disrespectful.

While ODRs have support for their validity and utility as measures of individual and school-wide behavior, there are some concerns inherent in the use of ODRs that impact their interpretation. First, ODRs do not represent a standardized measure or process, creating great variability between schools and across school districts in how ODRs are administered and managed. For example, in some settings ODRs are apart of a systematic process, characterized by clearly defined referral categories and trainings on when and how to properly issue an ODR, while other settings may be less formalized in the way the ODR administration process (McIntosh et al., 2009). Some other factors that may contribute to variability in the way schools administer ODRs include school administrator's views on ODRs, the level of adult monitoring in the school, the impact of writing an ODR for the referring teacher, and the impact of receiving an ODR for the referred student. These factors, and more, all have the potential to impact the base rates of

ODR frequencies across schools, making it difficult to compare ODR rates and risks across schools.

Another significant concern surrounding the use of ODRs is reflected in the process leading up to its issuance. ODRs are said to occur at the end of a behavioral chain, depicted in Figure 1, that begins with an incident of student misbehavior (McIntosh et al., 2009). The next step in the chain would be for an adult to be made aware of the misbehavior, typically through observation. Following this, the adult would have to make a determination of whether the behavior warrants an ODR. Each step in this chain is influenced by a multitude of factors that may or may not increase the likelihood of an ODR (McIntosh et al., 2009). For example, some factors that might impact whether a teacher is made aware of student's misbehavior in a classroom setting include the busyness of the classroom and level of classroom misbehavior. The administration of ODRs often occur as a snap-decision during moments when teachers are focused on multiple tasks (McIntosh et al., 2014). In an especially busy classroom where a teacher is pulled in many directions, they may not observe a student misbehavior or may be hyper-aware of certain behaviors or students. Furthermore, there is evidence showing that students in classrooms with poor teacher-rated classroom management and/or classrooms with high levels of misbehavior receive fewer ODRs, likely due to the impact of these factors on teacher monitoring (Pas et al., 2011). Yet, the most pressing implication of the ODR behavioral chain occurs at the level of determination. A major, and heavily studied, factor impacting how school staff determine whether a student receives an ODR is the subjectivity of the situation. Subjectivity is based on the likelihood that two individuals

can observe the same behavior and have different determinations about whether the behavior is grounds for an ODR. When ODRs are written in situations with a high likelihood of differential perception, they are categorized as subjective ODRs. Some common referral categories that are often considered to be subjective are disrespect, defiance, and harassment/threats. Student misbehavior that is more concrete and incite less disagreement on the determination of an ODR are classified as objective ODRs. Common objective ODR categories include truancy, fighting, and vandalism.

Teachers' use of subjective ODR referral categories is especially problematic given their prevalence and their association with racial disproportionality. Subjective ODRs are more common than objective ODRs. In a sample of over 400,000 students from 593 public middle schools from across the country, referrals for subjective situations constituted nearly half (49.4%) of all referrals written during the 2009-2010 school year (Predy, McIntosh, & Frank, 2014). An examination of the data from 1,666 elementary schools utilizing SWIS during the 2011-2012 school year classified 88% of the referrals as subjective (Smolkowski, Girvan, McIntosh, Nese, & Horner, 2016). Moreover, subjective ODRs are sites of significant racial disproportionality, impacting students of color at higher rates because the variability in teacher perceptions allows room for differential treatment of student behavior on the basis of race. For example, Skiba et al. (2002) found that the subjectivity of an ODR impacted which race/ethnicity was over-represented, with White students being more likely to receive an ODR for objective violations, like smoking, vandalism, obscene language, and Black students being more likely to receive an ODR for subjective reasons, like disrespect, excessive

noise, and making threats. Therefore, any efforts to try and understand and impact racial disproportionality in discipline should focus on understanding and impacting the administration of subjective ODRs.

Evidence of Racial Disproportionality in School Discipline

There has been ample evidence indicating that racial disproportionality is a pervasive concern within school disciplinary practices. Studies show that students of color receive office disciplinary referrals (ODRs) at higher rates than their White peers. For example, Wallace, Goodkind, Wallace, and Bachman (2008) found that Black, Latinx, and Native American students were consistently more likely to be sent to the office than White students from 1991-2005. Data from the 2005-2006 school year showed that the odds of Black students receiving an ODR in elementary and middle school were 2.19 and 3.79, respectively, times the odds of White students (Skiba et al., 2011). Rocque (2010) also found that Black students were more likely than other racial/ethnic groups (odds ratio (OR) = 1.58) to receive an ODR.

The increased likelihood of receiving an ODR sets the foundation for the increased exposure of Black students to more severe behavioral consequences in school. In fact, Skiba et al. (2002) found that Black males were more likely to be suspended because they were also more likely to be referred to the office. Indeed, evidence does support that students of color are overrepresented in exclusionary discipline. According to the Department of Education Office for Civil Rights (OCR), five percent of White students were suspended, on average, in comparison to 16 percent of Black students during the 2011-2012 school year (Office for Civil Rights [OCR], 2014). Race has been

found to significantly predict out-of-school suspension (OSS) regardless of the severity of the problem behavior (Skiba et al., 2014). Previous trends in national data have shown that the prevalence of suspension and expulsion amongst Black students continued to increase even when there was a downward trend for other racial and ethnic groups (Wallace et al., 2008). Cholewa, Hull, Babcock, and Smith (2018) also found that African American students were 1.47 times as likely to be sent to in-school suspension (ISS) than White students. Even though ISS is supposed to serve as a remedy to out-of-school suspension, students who received ISS still faced detrimental academic outcomes, such as higher drop-out rates. Moreover, higher rates of exclusionary discipline have been associated with higher rates of long-term patterns of disparity. An examination of education and justice system data in Missouri showed a strong association between disproportionate rates of OSS and disproportionate rates of juvenile court referrals (Nicholson-Crotty, Birchmeier, and Valentine, 2009). A study of secondary school students in Texas found that about a third of students who had been suspended or expelled repeated a grade in school, in comparison to about 5 percent of students without a suspension or expulsion (Fabelo et al., 2011). Findings demonstrate that Black and White students have increased odds of dropping out of school after experiencing exclusionary discipline, which was found to increase the odds of criminal offending for Black students (Pesta, 2018). Furthermore, exclusionary discipline practices do not seem to be effective at decreasing inappropriate behaviors. Evidence showed that receiving a suspension or expulsion had no significant effect on subsequent involvement in delinquent behavior (Pesta, 2018). Moreover, Oliver and Reschly (2007) noted that a

negative reinforcement trap is created, whereby teachers are more likely to continue to remove a student from the classroom because of the reprieve it provides and the student is more likely to repeat the behavior because of the escape it provides from nonpreferred classroom tasks.

While racial disproportionality presents a unique problem to all levels of K-12 education, it is critical to focus on this issue as it pertains to students in middle schools, grades 6-8. Evaluation of 2007 data from the National Center for Education Statistics showed that, starting in 6th grade, the percentage of Black students who were suspended or expelled greatly exceeded the percentages of other racial/ethnic groups experiencing the same exclusionary discipline (Aud, Fox, & KewalRamani, 2010). Black students have been found to be at increased odds of receiving ODRs when in middle school as compared to elementary school (Skiba et al., 2011). Furthermore, one study suggests that the developmental stage of middle school students, a time focused on autonomy and identity development, aligns to findings showing that students in grades 7-8 were more likely to be referred for subjective situations classified as disrespect than students in grades K-6 and 9-12 (Kaufman et al., 2010).

Predictors of Disproportionality

Multiple factors have been explored to try and explain why racial disproportionality exists within school disciplinary practice. Researchers have considered many student-level characteristics but have failed to produce consistent support. For instance, socioeconomic status has been thought to explain disproportionality, and although students from low-income communities have been over-represented in

exclusionary discipline, race continues to predict suspension and expulsion after controlling for socioeconomic status (Fabelo et al., 2011; Skiba et al., 2014).

Another student-level explanation is the differential involvement hypothesis, or the idea that children of color commit behavior infractions more often (Huang, 2018). However, studies have shown that, even when breaking the same school rule, Black students are more likely to be disciplined (Huang, 2018; Mizel et al., 2016; Fabelo et al., 2011). In a study of 381 classrooms in 21 elementary schools, Black students were at greater odds of receiving an ODR, even when controlling for the child's level of behavior problems (Bradshaw, Mitchell, O'Brennan, & Leaf, 2010). Additionally, findings from a nationally representative sample in 1990 showed that Black students were at greater risk of receiving out-of-school suspension, even though White students were more likely than Black students to endorse attitudes supportive of truancy, disrespect, and disregard for school property (Huang, 2018). Table 1 summarizes some of the studies that have sought to explain the issue of racial disproportionality using student-level variables. By in large, race persists as the most consistent predictor of differential experiences with school discipline.

Looking beyond student-level characteristics to predict this problem, there is a basis for considering the role of teacher/staff perceptions. First, the perceptions of school staff shape the expectations they have for their students. In an examination of the impact of pre-service teachers' perceptions of a vignette on student misbehavior, Kunesh and Noltemeyer (2015) found that, when the student was perceived to be Black, preservice teachers were more likely to expect recurrent misbehavior, even though the severity of

the misbehavior was rated similarly across student-race. Additionally, Hinojosa (2008) found that including measures of teacher expectations allowed for better prediction of suspension and expulsion. Furthermore, data indicates that teachers are susceptible to punish racially laden behaviors that have been misunderstood or misinterpreted. For example, findings from Tyler, Wade, and Walton (2006) showed that behaviors reflective of Black cultural values received lower ratings of perceived motivation and academic standing. It is also important to consider students' interpretations of their teachers' perceptions and how this interpretation impacts their behavior. For instance, Okonofua, Walton, and Eberhardt (2016) noted that Black students can often perceive biased treatment in the discipline practices of their teachers, which can negatively impact Black students' worries about their sense of belongingness and adequacy in school and contribute to an increase in misbehavior and disengagement. Contrarily, students' probability of receiving OSS and ISS has been found to decrease by 26 and 28 percent, respectively, when they believed their teachers had higher expectations of them (Hinojosa, 2008). Moreover, the need to consider the perceptions of teachers and school staff as a possible source of racial disproportionality is underscored by the prevalence of subjective office disciplinary referrals. As previously mentioned, many of the ODRs written for Black students are written for behaviors that are interpreted subjectively. Girvan, Gion, McIntosh, and Smolkowski (2017) found that, during the 2011-2012 school year, the disproportionate rate of subjective ODRs for African American students across all levels of schooling explained the majority of the variance in total disproportionality. The disproportionate assignment of subjective ODRs to Black

students demonstrates that teachers are likely to be less tolerant and/or less willing to deal with misbehavior from their Black students.

The Potential Role of Implicit Bias

Given the proposed relationship between teacher/school staff perceptions and the overrepresentation of Black students in exclusionary discipline, researchers have started to shift their focus to factors that impact the way teachers evaluate their students' behaviors. One such factor is implicit bias. Implicit biases represent the attitudes and beliefs that exist within one's unconsciousness. These biases are thought to be caused by various encounters, often fleeting experiences and interactions, that form unconscious generalizations, associations, and stereotypes within our mind (Smolkowski et al., 2016). Everyone is believed to hold some implicit biases and implicit biases can be positive or negative (Staats, 2016). Implicit biases differ from explicit biases, in that implicit biases are thought to result from more automatic, unconscious processing, while explicit biases function as the result of consciously held beliefs (Smolkowski et al., 2016). Explicit biases can be accessed through introspection and are often evaluated through self-report measures. Implicit biases are not easily accessed through introspection and may even contradict an individual's professed beliefs.

In a review on the sources of implicit attitudes, Rudman (2004) summarized that implicit biases are shaped by many factors including early life experiences, experiences that incite affective responses, the cultural milieu of society, and cognitive consistency principles, which state that people cognitively attribute similar evaluations to individuals that share group membership. Gawronski and Bodenhausen (2017) propose that implicit

biases are best understood using an interactionist perspective that considers person-level and situation-level factors. According to this approach, implicit biases function as a result of the preexisting associations that exist within an individual (person-level factors), as well as the context specific factors that allow an individual to access these preexisting associations (Gawronski & Bodenhausen, 2017). Based on findings correlating anti-Black implicit bias to a region's former level of dependence on slave labor, Payne, Vuletich, and Brown-Iannuzzi (2019) concluded that there is a historical basis associated with the development of implicit biases, noting that a "legacy of discrimination has created structural inequalities that may continue to cue stereotypical associations" (p. 11694). A key line of inquiry surrounding implicit bias involves understanding how these unconscious associations impact human behavior. The MODE model proposes a framework for understanding the factors impacting how implicit bias relates to judgments and behaviors. MODE, an acronym for motivation and opportunity as determinants, states that the influence of attitudes and bias on behavior can be deliberate or spontaneous dependent upon the resources, opportunity, and motivation needed to implement this deliberative processing; furthermore, the process can involve a mix of deliberate and spontaneous components (Fazio & Olson, 2003).

Within education research, implicit bias is often promoted as a driving force behind discriminatory behavior in schools. For example, the Kirwan Institute for the Study of Race and Ethnicity at The Ohio State University has published multiple briefs and reports purporting implicit bias to be a key predictor of the differential treatment of Black students in school discipline (Rudd, 2014; Staats, 2014). Inferences based on

teachers' responses to vignettes concluded that biases about the attributes of students likely impact teachers' expectations of and responses to their students' behavior, thus, making them more hyper-aware and more likely to "interpret ambiguous acts in an unfavorable light" (Kunesh & Noltemeyer, 2015, p. 491). The vulnerable decision points model is a specific framework that has been proposed to explain the role of biases in disciplinary decisions.

Predicated on the interactionist perspective of implicit bias, the vulnerable decision points model holds that disproportionate disciplinary decisions result from an interaction between individual biases and contextual elements, and there are certain events, situations, and/or characteristics, known as vulnerable decision points or VDPs, that increase the likelihood of biased decision-making (McIntosh, et al., 2014). The authors further acknowledge that explicit bias and implicit bias are influenced by different VDPs. Explicit biases are thought to be less resistant to change (Smolkowski et al., 2016). Therefore, top-down policies within a school are considered a VDP that have the potential to mitigate or exacerbate the impact of explicit bias (McIntosh et al., 2014). Since implicit bias results from automatic cognitive processing, the VDPs proposed to impact implicit bias are situations of ambiguity and moments that require quick decisions (McIntosh et al., 2014). Subjective ODRs have been evaluated as a potential VDP (Girvan et al., 2016)

While there is theoretical support for the role of implicit bias in racial disproportionality in school disciplinary practices, very few studies have empirically studied the relationship between implicit bias and the disciplinary decisions of teachers

and school administrators. Instead, studies have taken the approach of disproving alternative explanations of disproportionality to indirectly support implicit bias as the source for racial disproportionality (Skiba et al., 2002). Yet, establishing an empirical basis for the role of implicit bias in racial disproportionality has important implications for educational research and policy.

Measuring Implicit Bias

To begin quantifying the relationship between implicit bias and racial disproportionality in school discipline, there needs to be a strong, valid measure of implicit bias. The measurement of bias has been proposed as existing along a continuum based on the potential for respondents to control their responses (Maass, Castelli, & Arcuri, 2000). Explicit biases are considered easier to control than implicit biases; therefore, more direct measures are used. Implicit biases are usually measured using indirect measures. Since implicit bias is assumed to inaccessible through introspection, indirect measures assess involuntary and less controllable behaviors, such as reaction times, as a proxy for the underlying attitudes (Baston & Vosgerau, 2016). Some example procedures for indirectly measuring implicit bias include making inferences about non-verbal interactions and social behaviors, analyzing verbal interactions, and assessing physiological responses in certain situations (Maass et al., 2000). Oftentimes, researchers are interested in utilizing a cognitive approach, such as category priming, to access unconscious associations reflected in behavior and perception (Maass et al., 2000). The most common cognitive measure of implicit bias is the Implicit Association Test (IAT).

The IAT was developed by Greenwald, McGhee and Schwartz (1998) and is currently administered via a virtual laboratory managed by Project Implicit, a non-profit organization involving the developers and other researchers. The IAT procedure gathers data on how quickly individuals are able to make associations between a target concepts, such as gender, and evaluative attributes, such as pleasantness/unpleasantness. There are many different types of IAT tests that evaluate various presentations of implicit bias. The Race Implicit Association Test, or Race-IAT, evaluates individuals' preference for either the White or Black race. The test is structured into five phases. In Phase 1, participants practice sorting items into the binary target concept, by assigning items to one category using the left hand and assigning items to the other category using the right hand. In Phase 2, participants practice sorting categories of evaluative attributes in the same manner. During Phase 3, known as the initial combined task, participants alternate between categorizing the target concepts and the evaluative attributes, using the same response pattern that was learned during the first two phases. In Phase 4 is a learning phase, introducing a new response pattern by switching the hand used to assign categories of the target concept. Phase 5 superimposes the response patterns from the second and fourth phases (Greenwald et al., 1998). The structure and the scoring of the IAT rests on the assumption that people will more quickly ascribe an attribute to a target category when it aligns to their implicitly held attitudes and beliefs. The ease with which participants completed the third and fifth phases, measured using response latencies, is considered a reflection of the automaticity with which that participant associated the target concepts with the paired attribute. Scores from the IAT, or the IAT effect,

represent the difference between the mean response latencies on the third and fifth phases, reported in milliseconds. Consider this example: Phase 3 of an IAT with a gender target involves categorizing feminine names and pleasant words with the left hand and Phase 5 involves categorizing masculine names and pleasant words with the right hand. If a participant's response latencies are faster on Phase 5 than Phase 3, that participant's scores would reflect an implicit bias favoring men.

The IAT has well-established reliability evidence. In a comparison of seven indirect measures of implicit attitudes, the IAT demonstrated the strongest internal consistency, on average ($\alpha = 0.88$; Bar-Anan & Nosek, 2014). However, the evidence for the construct and criterion validity of the IAT has been mixed. For example, the IAT has demonstrated modest correlations with direct measures ($r = 0.35$) and indirect measures of bias ($r = 0.39$) (Bar-Anan & Nosek, 2014). Meta-analysis showed small correlations between the IAT and explicit measures of similar constructs ($\rho = 0.24$-0.26; Hofman, Gawronski, Gswendner, Le, & Schmitt). However, Greenwald et al. (1998) recommended that low correlations between the IAT and direct measures of attitudes be interpreted as a divergence between the implicit and explicit measurement of constructs. This idea was further supported by findings demonstrating that implicit and explicit measures are differentially impacted by contextual factors, like social sensitivity of the target being measured (Greenwald, Poehlman, Uhlmann, & Banaji, 2009). Instead, the convergent validity of the IAT has been established utilizing confirmatory factor analysis, modeling a second-order latent construct utilizing the IAT and two other indirect measures of implicit attitudes, the response-window IAT and the response-window

evaluative priming, with an average factor loading of $\beta = 0.79$ (Cunningham, Preacher, & Banaji, 2001). Moreover, the correlations between the IAT and direct measures of bias have been shown to increase as a function of the spontaneity of the measure and conceptual correspondence between the measures (Hofman, Gawronski, Gswender, Le, & Schmitt, 2005). Evidence for the predictive validity of the IAT has been mixed. Criticisms have largely relied upon the small to moderate correlations that exist between the IAT and criterion variables. For example, meta-analysis on the predictive validity of the IAT across 184 independent samples found effect sizes ranging from $r = 0.171$-0.483, with an average effect size of $r = 0.274$ (Greenwald et al., 2009). However, Greenwald, Banaji, and Nosek (2014) noted that regardless of the size of the correlations, the statistical significance indicates some level of societal impact on human behavior. A practical example of this can be seen in a sample of 140 White participants recruited to complete a behavioral activity; Race-IAT was found to predict behavior towards the Black confederates, with less pro-White bias indicating more positive interactions with the Black confederate (Heider & Skowronski, 2007). Furthermore, evidence from a separate sample participating in a similar behavioral activity indicated that as IAT effects increased, participants displayed an increase in friendly nonverbal behaviors towards White confederates (Heider & Skowronski, 2007). Moreover, findings from Greenwald et al. (2009) suggested that the predictive validity of IATs is stronger when criterion measures are more spontaneous and produced by participants' behavior, Finally, Race-IATs were found to demonstrate greater predictive validity than self-report measures for criterion involving Black-White interracial behavior (Greenwald et al., 2009).

Addressing Disproportionality

One of the primary reasons to evaluate the sources of disproportionality is so schools are able to address any issues of disproportionality by targeting the potential source. Various solutions have been proposed to address racial disproportionality; however, few of these solutions effectively address the probable role of implicit bias. For example, Okilwa and Robert (2017) suggested the use of social justice school leadership, which calls for school leaders to serve as advocates that work to ensure equitable opportunities for all students to succeed. School administrators play a critical role in impacting their schools' disciplinary practices by establishing and enforcing the school's behavioral expectations and by responding to ODRs and other behavior concerns. Evidence also supports the role of principals' general attitudes and philosophies about school discipline in influencing disproportionality. In a study that used hierarchical linear modeling to examine the effect of behavior-, student-, and school- characteristics, students were found to be at greater odds of being suspended or expelled, OR = 1.376 and OR = 2.320, respectively, when they attended a school with a principal who favored exclusionary discipline versus a principal with less favorable attitudes of exclusionary discipline (Skiba, Chung, Trachok, Baker, Sheya, & Hughes, 2014). However, in that same study, the percentage of Black enrollment at a school persisted as the strongest predictor of exclusionary discipline, a finding that the researchers posited might stem from implicitly held beliefs about the behavioral risk posed by Black students and the need for more punitive measures (Skiba et al., 2014). Therefore, even though school administrators can serve as a critical first step for creating an environment to address

disproportionality, additional steps may need to be taken to address racial implicit bias in school discipline.

A way that school administrators can begin their efforts of combatting disciplinary disparities is through the examination of data (Carter et al., 2017; Staats, 2016; Townsend, 2000). For instance, there have been steps taken at the federal level to target disparate discipline practices. Under the Obama administration, the Department of Education Civil Rights Division gathered data and conducted analyses to determine the impact of disproportionality, to highlight the differential treatment of students and encourage change within disciplinary practices (Okilwa & Robert, 2017). Furthermore, state and local government often require school districts to gather discipline data to monitor for disparities. Researchers recommend that educators and administrators use indicators of racial disproportionality in conjunction with additional data to determine contributors to disproportionality that could be specifically targeted for intervention (Boneshefski & Runge, 2014; McIntosh et al., 2014). For example, schools might statistically analyze data, observe teachers, or assess school climate to determine whether teachers or students are in need of support (Boneshefski & Runge, 2014). According to the VDP model, data collection could be beneficial for addressing explicit bias because of the objective way it holds districts and schools accountable (McIntosh et al., 2014). Yet, without clearly identifying the way implicit bias undergirds disciplinary data, there is no guarantee that the use of data-based decision making will effectively mitigate the impact of implicit bias. Considering that implicit biases are held outside an individual's

conscious awareness, it is unlikely that teachers and school staff will attribute their disciplinary data to their implicitly held attitudes and beliefs.

Data-based decision-making is a core tenet of another oft-supported solution for racial disproportionality: School-Wide Positive Behavior Interventions and Supports (SWPBIS). In fact, the VDP model highlights school-wide behavior practices, such as SWPBIS, as an intervention for reducing disproportionality because of the shared behavioral expectations and the potential reduction in student misbehavior (McIntosh et al., 2014). SWPBIS is a multi-tiered system of support that relies on explicit expectation-setting and positive reinforcement as a proactive approach to behavior management (Boneshefki & Runge, 2014). Evidence has shown that SWPBIS can be effective at producing positive student outcomes. Longitudinal analyses of data from 428 schools in Illinois showed that schools that implemented SWPBIS with fidelity showed a reduction in ODRs and suspensions (Simonsen et al., 2012). Implementation of SWPBIS with fidelity at the high school level as has been associated with increased attendance rates and a reduction in overall ODRs (Freeman, Simonsen, McCoach, Sugai, Lombardi, & Horner, 2016). Although it has demonstrated potential as a solution for reducing behavioral incidents, the evidence is mixed regarding whether SWPBIS is effective at impacting the racial disparities. Findings have shown that improving implementation of SWPBIS was associated with a reduction in exclusionary discipline for Black students (Tobin & Vincent, 2011). Yet, another study has shown that SWPBIS implementation did not decrease rates of exclusionary discipline for Black students in the same way it did White students; findings actually demonstrated an increase in the length of long-term

exclusion for Black days following SWPBIS implementation (Vincent & Tobin, 2011). Furthermore, SWPBIS does not specifically address the racial and cultural biases incorporated in decision-making about school discipline. This is evident in the assumption that creating school-wide shared behavioral expectations will allow educators to perceive and respond to behavior infractions the same way. However, this assumption does not acknowledge the ways the similar behaviors may be interpreted differently for different students (Sugai, O'Keeffe, & Fallon, 2012). Therefore, there has been a call for SWPBIS to address issues of race and culture, with suggestions for strategies to use at every tier of support in an effort in increase the recognition of the contextual factors and cultural learning histories that shape behavioral actions and expectations(Sugai et al., 2012; Klingner et al., 2005).

Thus, proposed solutions should seek to not only reduce the occurrences of behavior infractions but should also seek to mitigate the effect of implicitly biased decision-making. Gregory, Skiba, and Noguera (2010) expand upon this point by noting that solutions to racial disproportionality should place a specific emphasis on the role of race and culture. According to Carter et al. (2017), in order "to successfully address racial disparities in discipline, we must acknowledge and work through issues of race" (p 218). This philosophy has led many researchers to call for interventions that engage educators in critical conversations about race with the aim of increasing their cultural competence (Monroe, 2005; Townsend, 2000). While race, ethnicity, and culture all represent different constructs, they are often conflated due to their congruence with one another. Yet, in research and colloquially, race and ethnicity are often considered synonymous and

reduced to interchangeable categories (Worrell, 2014). Since cultural practices are often racially and culturally bound, the assumption becomes that confronting cultural differences will improve issues surrounding race and ethnicity within schools, and vice versa.

Defining Cultural Competence in Teaching

Cultural competence amongst educators is considered the ability to successfully teach students from differing cultural backgrounds (NEA, 2015). The National Education Agency proposed that cultural competence is comprised of various skills and practices, including accepting and respecting diversity, cultural self-awareness, the ability to navigate dynamics of cross-cultural differences, and the reliance on knowledge of students' cultures (NEA, 2015). Cultural competence is widely accepted as a multidimensional construct; a commonly cited, tripartite model from the counseling psychology literature presents cultural competence as a construct encompassing the following components: beliefs/attitudes, knowledge, and skills (Sue, 2001; Sue, Arredondo, McDavis, 1992). The first component involves acknowledging and recognizing the impact of an individual's values, beliefs, and attitudes towards racial/ethnic minorities and multiculturalism. The knowledge component includes an individual's understanding of one's personal worldview, their understanding of other cultures, and the sociopolitical influences impacting both. Finally, the skills component reflects the actual strategies and techniques utilized when working with individuals from different cultures and racial/ethnic backgrounds (Sue, 2001; Sue et al., 1992). The process of becoming culturally competent has been theorized to exist along a continuum,

ranging from cultural destructiveness to cultural proficiency; the stages along the continuum are reflective of all the dimensions of cultural competence, and not reflective of one set of behaviors or beliefs (Cross et al., 1989). Furthermore, the continuum is considered to be non-linear process, with changes in attitudes or behaviors allowing individuals to move forward or backward along the continuum. Additionally, while cultural proficiency is presented as the goal along this continuum, it is understood that individuals at this end of the spectrum still have room for growth in their development as culturally competent practitioners (Cross et al., 1989). Therefore, the expectation is that educators are constantly working to develop and maintain their cultural competence.

There is a growing focus on cultural competence in education due to the need to prepare teachers to meet the needs of an increasingly diverse student population. According to the National Center for Education Statistics, enrollment in public schools increased by approximately three million students between the years of 2000 and 2015. During that same time period, however, the percentage of White students attending public schools decreased from 61 percent to 49 percent (de Brey, Musu, McFarland, Wilinson-Flicker, Diliberti, Zhang, Branstetter, & Wang, 2019). Furthermore, in 2015, a third of public school students attended schools where minority students constituted at least 75 percent of the student population. While schools are seeing increased enrollment of non-White students, there have also been increases in non-White, public school teachers. The percentage of teachers who were Hispanic, Asian, or multi-racial was higher during the 2015-2016 school year than the 2003-2004 school year. Additionally, urban schools and schools with higher percentage of minority students reported higher percentages of

minority teachers (de Brey et al., 2019). Although racial congruence between teachers and students does not guarantee positive outcomes (Bradshaw et al., 2010), evidence has suggested that students benefit from having a teacher of the same race/ethnicity. Analysis of seven years of data from the Florida public school system showed that having a teacher of the same race had a positive effect on reading achievement for Black and White students and math achievement for Black, White, and Asian/Pacific Islander students. Additionally, findings from North Carolina show that Black students experience lower rates of exclusionary discipline when they have Black teachers; these findings persist across grade-level, gender, or eligibility for free and reduced-price lunch (Lindsay & Hart, 2017). Yet, minority teachers continue to be underrepresented nationally within public schools. Although there has been an increase in non-White teachers, eighty percent of teachers in public schools were White (de Brey et al., 2019). Even in metropolitan areas, which reported the highest percentage of minority teachers, almost 70 percent of the teaching staff in public schools was White during the 2015-2016 school year (de Brey et al., 2019).

Therefore, most students of color will encounter teachers that do not share their race and/or culture, increasing the likelihood that teachers enter the classroom with limited understanding of their students' values and home lives (Townsend, 2000). This may lead to a reliance on stereotypes or the adoption of a color-blind attitude when interacting with students from different backgrounds. Furthermore, an incongruence between student and teacher race/ethnicity fosters the possibility of a gap between the values of schools and the values of racially and ethnically diverse families. Cultivating

culturally competent teachers should mitigate the predicted concerns associated with racial incongruence between teachers and an increasingly diverse student population. Yet, cultural competence presents as a benefit for racial/ethnic minority teachers.

Demonstrating Cultural Competence in Teaching

There are many ways that teachers can demonstrate their cultural competence; typically, education researchers purport the adherence to culturally relevant pedagogy as a strategy for implementing cultural competence (NEA, 2015). Culturally relevant pedagogy is a theoretical framework proposed to guide educational practices, especially with diverse student populations. Using a grounded theory approach, Ladson-Billings (1995) evaluated findings from her work with 8 exemplary teachers of Black students to identify three components for culturally relevant teachers: academic success, cultural competence, and sociopolitical consciousness. In other words, culturally relevant teachers exhibit "an ability to develop students academically, a willingness to nurture and support cultural competence, and the development of a sociopolitical or critical consciousness" (Ladson-Billings, 1995, p 483). Based upon this, Ladson-Billings (1995) concluded that culturally relevant pedagogy is predicated on the way teachers perceive themselves and others (i.e., students, parents, community members), the way social relations are structured within the classroom, and how knowledge is imparted and assessed. A conceptually similar framework, culturally responsive teaching, explicated five critical elements employed by culturally responsive educators, including a culturally relevant curricula and a competency for cross-cultural communication (Gay, 2000). More recently, there has been a call for culturally sustaining pedagogy, which "requires that our

pedagogies be more than responsive of or relevant to the cultural experiences and practices of young people- it requires that they support young people in sustaining the cultural and linguistic competence of their communities while simultaneously offering access to dominant cultural competence" (Paris, 2012, p. 95). Extending the pedagogical framework put forth by Ladson-Billings (1995) and Gay (2000), Weinstein, Curran, and Tomlinson-Clarke (2004) introduced culturally responsive classroom management, considered "classroom management in the service of social justice," as the infusion of culturally relevant pedagogy into the way teachers structure and manage the behavioral climate of their classrooms (p. 27).

It is important to note that culturally relevant pedagogy, along with the other culturally responsive frameworks, are positioned as a mindset and an approach, rather than a prescribed set of actions or strategies for supporting students. Therefore, it becomes the role of the culturally competent teacher to utilize this mindset to guide their behaviors and manage the students' behaviors in the classroom. For example, some teacher behaviors that have been deemed culturally competent include demonstrating personal interest in students and creating a caring environment, while also establishing clear set expectations and an assertive stance to learning (Brown, 2004). Another way that teachers can demonstrate their cultural competence is through critical self-reflection, an on-going form of processing that urges teachers to evaluate "how their positionality influences their students in either positive or negative ways" (Howard, 2003). While the difficulty associated with critical self-reflection have been acknowledged, it is considered a necessary task for the development of culturally relevant teaching (Howard, 2003).

Measuring Teachers' Cultural Competence

Although there is growing interest to increase the cultural competence of educators, there is not a gold-standard method for assessing teachers' levels of cultural competence. A commonly used measure, the Teacher Multicultural Awareness Scale, or TMAS, is a self-report assessment of teachers' awareness and sensitivity toward cultural issues in the classroom (Ponterotto, Baluch, Greig, & Rivera, 1998). The initial validation study of the TMAS in a sample of pre-service and in-service teacher demonstrated acceptable internal consistency ($\alpha = 0.79\text{-}0.91$) and adequate convergent validity with measures of attitudes towards gender/racial equity and attitudes towards other racial groups ($r = 0.35\text{-}0.41$; Ponterotto et al., 1998). However, a major drawback of the TMAS is that it is a unidimensional measurement, with factor analysis confirming a single-factor during initial validation (Ponterotto et al., 1998), for a construct that is considered to be multidimensional. The Multicultural Teaching Competency Scale was developed using the tripartite model of cultural competence from the counseling psychology literature (Sue, Arredondo, & McDavis, 1992). In its initial development, the MTCS had three subscales, grounded in each of the proposed dimensions of cultural competence. The first subscale, awareness, represented teachers' awareness of "self and others as cultural beings, their attitudes and biases, and the need to create culturally sensitive learning environments" (Spanierman et al., 2011). The second subscale, knowledge, reflected teachers' knowledge of culturally relevant pedagogy and other sociopolitical or cultural dynamics that might impact. The final subscale, skills, reflected teachers' ability to select, implement, and/or evaluate instructional strategies, behavior management techniques,

and school-wide policies based on their cultural responsiveness (Spanierman et al., 2011). Following validation using exploratory and confirmatory factor analysis procedures in a sample of 258 pre-service and in-service teachers, a two-factor model was supported representing two subscales across 16-items, Multicultural Teaching Knowledge (6 items) and Multicultural Teaching Skill (10 items). The MTCS has demonstrated acceptable internal consistency for the total scale ($\alpha = 0.88$), and each subscale (MTCS Knowledge: $\alpha = 0.80$; MTCS Skill: $\alpha = 0.83$). Additionally, there is some initial evidence of its convergent validity through a moderate correlation to a unidimensional measure of multicultural teacher awareness ($r = 0.51$, $p < 0.01$), and its divergent validity through a significant, negative correlation to a measure of color-blind racial attitudes ($r = -0.44$, $p < 0.01$) (Spanierman et al., 2011). Furthermore, the MTCS has been found to not be associated with social desirability, demonstrating a non-significant correlation with the Marlowe-Crowne Social Desirability Scale-Short Form (Spanierman et al., 2011).

Cultural Competence and Implicit Bias

Education researchers have worked to establish a link between culturally responsive practices and implicit bias, arguing that cultural competency training is a way of reducing the effect of racial implicit bias school disciplinary decision-making (Carter et al., 2017). Conceptually, the idea that increasing cultural competence decreases the influence of implicit bias aligns to the dimensions of cultural competence presented within the counseling psychology literature; the beliefs and attitudes component of cultural competence involves addressing biases and the way they hinder effective practices (Sue et al., 1992). In fact, there is evidence to support that higher cultural

competence has an effect on teacher behaviors. For example, findings have shown that, as teachers reported more cultural awareness, they also reported increased expectations for Black students with lower school connectedness, demonstrating a rejection of deficit-based assumptions about Black students performance and engagement in school (Mahatmya, Lohman, Brown, & Conway-Turner, 2016). Additionally, findings showed that following behavioral consultation with multicultural consultation, focused on helping teachers improve their culturally responsive classroom management, proved to have an additive benefit of increasing and maintaining high frequencies of teachers' labeled praise (McKenney, Mann, Brown, & Jewell, 2017). Yet, it remains unclear whether increasing the cultural competence of teachers would indeed moderate the potential effect of racial implicit bias in their disciplinary decisions. The proposed study seeks to fill a gap in the literature by empirically evaluating the role of racial implicit bias in school discipline and whether teachers' cultural competence moderates that relationship.

Proposed Study

A primary goal of K-12 schools is to ensure that all students have access to equitable educational opportunities. Yet, schools have persistently served as sites for the differential treatment of students, especially students from racial/ethnic and linguistic minorities. Schools in the United States have been both overt and covert in the ways they maintain the disparate treatment of students. One of the primary indicators of the racial disparities that exist in schools is the persistent overrepresentation of Black students in school disciplinary data. Data show that Black students receive office disciplinary

referrals at higher rates when compared to their non-Black peers. Additionally, studies show that Black students are at greater risk for out-of-school suspension, in-school suspension, and expulsion that their peers, with some evidence to indicate that this risk is predicated by the disproportionate administration of ODRs. Increased encounters with exclusionary discipline often decreased the amount of instructional time students received, negatively impacting academic achievement (Gregory, Skiba, & Noguera, 2010). For Black students, specifically, the overrepresentation in exclusionary discipline data has been found to relate to higher rates of drop-out and increased likelihood of criminality in adulthood (Pesta, 2018) Since ODRs often serve as the initial step in the discipline process, it is especially important to understand the factors impacting why Black students are more likely to be targeted with this kind of disciplinary response.

In seeking to understand what might be causing this racial disproportionality, the literature has failed to demonstrate a consistent explanation beyond race/ethnicity. Differential rates of misbehavior and sociodemographic factors, such as poverty, are commonly considered as possible predictors of disproportionate rates of discipline. Yet, evidence does not support that Black students misbehave more frequently than White students (Huang, 2018; Mizel et al., 2016; Fabelo et al., 2011). Furthermore, studies have shown that Black students are more likely to be disciplined, even when displaying the same problem behaviors as their White peers (Huang, 2018; Mizel, Miles, Pedersen, Tucker, Ewing, & D'Amico, 2016; Fabelo et al., 2011). Additionally, strong predictors of racial disproportionality, such as socioeconomic status or special education eligibility, have been inconsistent at mitigating the effects of race. Given the persistence of race as a

predictor of exclusionary discipline in schools, researchers have started to theorize that implicit biases serve an important role in how teachers and administrators respond to student misbehavior.

Since many theorists support the idea that implicit bias undergirds racial disproportionality in school discipline, interventions have been proposed to minimize the impact of implicit bias. For instance, many have suggested an increased focus on the cultural competence of teachers and schools. Practices such as culturally relevant pedagogy, culturally responsive classroom management, and self-reflective teaching are all strategies that seek to make teachers more culturally competent, and in turn, less likely to perpetuate disparate disciplinary outcomes. While there is a strong, theoretical basis supporting implicit bias as a predictor of disproportionate school discipline rates, there is little to no quantitative evidence delineating a direct association between the two constructs. Furthermore, more evidence is needed to know whether cultural competence actually moderates the expected impact of implicit bias of disproportionality. Therefore, the proposed study seeks to answer the following research questions:

1. To what extent does middle school teachers' implicit bias predict disproportionality in their administration of subjective office disciplinary referrals to Black students?
2. To what extent does cultural competence moderate the strength of the relationship between middle school teachers' implicit bias and disproportionality in the administration of subjective office disciplinary referrals to Black students?

Methods

Setting and Participants

The Houston Independent School District (HISD) serves as a promising environment for this intervention for many reasons. First, HISD is committed to addressing racial disproportionality and culturally responsive practices. As a part of their most recently published District Improvement Plan, HISD outlined 18 intended strategies to address racial disproportionality in their ODR and exclusionary discipline data, including the goal to increase the amount of schools trained in implicit bias and cultural responsiveness. Furthermore, the district's use of data collection for improvement planning is a clear example of social justice leadership. Each school within the district publishes their own Improvement Plan, with goals that are established through shared decision-making. Also, HISD has a documented history of racial disproportionality. HISD utilizes the Public Education Information Management System (PEIMS) to document their office discipline referrals and exclusionary discipline decisions. According to PEIMS ODR data collected from the 2015-2016 school year, Black students in HISD, who comprised only a quarter of the districts' student body, were over-represented in all areas of exclusionary discipline, while White students, who comprised less than 9% of the districts' student body, were under-represented in all areas of exclusionary discipline. Furthermore, the majority of the office discipline referrals and exclusionary discipline occurs at the secondary level. Finally, the size and demographics of HISD also complement the goals of this study well. HISD is the largest district in the state of Texas and the 7th largest district in the United States, serving nearly 210,000

students across 280 schools. The racial breakdown of the district during the 2018-2019 school year was 62% Latinx, 23% Black, 9% White, 4% Asian/Pacific Islander, 1% Multi-racial, and <1% American Indian.

Within the district, there are 38 middle schools from which to sample. During the 2018-2019 school year, the middle schools served about 34,000 students, with a demographic profile similar to the district's percentages: 63% Hispanic, 24% Black, 8% White, 3% Asian/Pacific Islander, 1% Multi-racial, and <1% American Indian. The district employs nearly 2,000 teachers in their middle schools, over half of which serve as general education teachers (58%). The demographics of the teachers in HISD middle schools during the 2018-2019 school year were 49% Black, 25% White, 19% Hispanic, 7% Asian/Pacific Islander, and 1% Multi-racial. Middle schools with Principals who have expressed interest in addressing racial disproportionality will be eligible for this study. Schools will be randomly sampled for participation in this study from the eligible schools. All general-education teachers within each of the sampled schools will be eligible to participate. Per the recommendation of Bollmer et al. (2007), data from teachers who administered less than 10 subjective ODRs for both Black students (target group) and students of all other Races/Ethnicities (comparison group) will be excluded from the analysis.

Dependent Variable

Rates of subjective ODRs will be gathered from a school-level disciplinary report generated and provided by school administrators. Reports will indicate: (1) the referring teacher, anonymously coded, (2) the referred student, anonymously coded, (3) the race of

the student, (4) the location of the incident, and (5) the PEIMS referral code and category. The identification of categories that are considered subjective ODRs will align to subjective ODR categories selected in previous studies (see Girvan et al., 2017; Skiba et al., 2002). Data for ODRs that are non-subjective or for incidents that occurred outside of the classroom setting will be excluded from the analysis.

Based on these data, raw differential representation, or RDR, estimates will be calculated for each teacher using the following formula:

$$RDR = \#\ of\ Subjective\ ODRs_{Black\ Students} - \frac{\#\ of\ Subjective\ ODRs_{Black\ Students}}{Risk\ Ratio_{Black-Other\ Students}}$$

$$Risk\ Ratio_{Black-Other\ Students} = \frac{(\#\ of\ Subjective\ ODRs_{Black\ Students} / \#\ of\ Black\ Students)}{(\#\ of\ Subjective\ ODRs_{Other\ Students} / \#\ of\ Other\ Students)}$$

Black students will serve as the target analysis group and all other students will serve as the reference group. The RDR values will represent an estimate of the number of Black students who received a subjective ODR but would not have if they were disciplined at the same rate as their non-Black peers. RDR estimates are moderately correlated with other common measures of disproportionality: risk ratio (r =), risk differences, and discipline rates (Girvan et al., 2013). Additionally, RDR estimates have been found to be temporally stable, based on correlations between RDR calculations from three consecutive school years.

Measures

Racial Implicit Bias. Racial implicit bias will be measured using the Race Implicit Association Test, or Race-IAT (Greenwald, McGhee, & Schwartz, 1998). The Race-IAT

is a free, self-report measure of the unconscious preference for Black people or White people. The Race-IAT can be accessed electronically via the Project Implicit website. The test is structured into five phases of sorting stimuli into binary categories for the target concept and attribute dimensions. For the target concept, participants will sort faces of Black and White people and for the attribute dimension, participants will sort words according to whether they have good or bad connotations. Prior to beginning the test, an instructions page features the correct categorization of all the stimuli. The first two phases of the IAT allow participants to practice responding to stimuli from either the target or attribute categories. Phase 3 combines the tasks from phases 1 and 2, with participants switching between categorizing the target concepts and the attribute dimensions. In Phase 4 is a learning phase, introducing a new response pattern by switching the hand used to assign categories of the target concept. Phase 5 superimposes the response patterns from the second and fourth phases (Greenwald, McGhee, & Schwartz, 1998). Response latencies are calculated for each evaluative phase (during phases 3 and 5). The total score for the IAT, or the IAT effect, represent the difference between response latencies on the third and fifth phases, reported in milliseconds. Higher IAT scores on the race-IAT will indicate bias favoring White people. Per the recommendation of Greenwald et al. (1998), IAT effects should range from 300-3000ms, considering values outside of this range outliers to be excluded from the analysis.

The Race-IAT has demonstrated good internal consistency, r = 0.79-0.86; Bar-Anan & Nosek, 2014). Evidence for the convergent validity of the Race-IAT has been established using confirmatory factor analysis procedures to model the latent construct of implicit

bias using Race-IAT effects and two other indirect measures of implicit bias (Cunningham et al., 2001). Moreover, IAT effects have demonstrated stronger correlations with explicit measures that rely on spontaneity in their response (Greenwald et al., 2009; Hofmann et al., 2005). Evidence of predictive validity showed small, significant effects of Race-IAT on criterion behaviors that are strengthened when the criterion is produced by participants' behavior, is considered to be more spontaneous than controlled, and is conceptually congruent with the Race-IAT (Poehlman, Uhlmann, & Banaji, 2009)

Cultural Competency. Teachers' cultural competency will be assessed using the Multicultural Teaching Competency Scale (MTCS; Spanierman et al., 2011). The MTCS is a 16-item, self-report measure rated on a 6-point Likert scale (ranging from strongly disagree to strongly agree), resulting in a total score and two subscale scores (MTCS Knowledge and MTCS Skill). Total scores range from 6-96 and higher scores are indicative of higher cultural competency. The MTCS has been validated in a sample of 258 pre-service and in-service teachers. Internal consistency within this sample was good for the total scale ($\alpha = 0.88$), and each subscale (MTCS Knowledge: $\alpha = 0.80$; MTCS Skill: $\alpha = 0.83$). Convergent and divergent validity has been established through correlations with a measure of multicultural teacher awareness, ($r = 0.51$, $p < 0.01$), and a measure of color-blind racial attitudes, ($r = -0.44$, $p < 0.01$), respectively (Spanierman et al., 2011). Within the validation sample, the MTCS was found to not be associated with social desirability as measured by the Marlowe-Crowne Social Desirability Scale-Short

Form (Spanierman et al., 2011). Internal consistency for this proposed study will be calculated and reported.

Control Variables. Teachers' race/ethnicity and the years of experience they have as a teacher will serve as control variables and are not of primary interest in the analysis. There is some evidence to suggest that teachers' race/ethnicity impacts the way they perceive students' behaviors (Lindsay & Hart, 2017; Kunesh & Noltemeyer, 2015). Teachers' years of experience has been associated with less reliance on punitive measures, like ODRs. These data are currently collected administratively by HISD.

Procedure

Upon receiving IRB approval and consent to access disciplinary data from the HISD Research Committee and district-level administrators, the researcher will work with the district's administration to solicit participation from middle/high school principals within the district based on their interest in understanding the role of implicit bias in their disciplinary practices. Following approval by school principals', the proposed study's measures will be electronically administered to all classroom teachers at the beginning of the school year. The Race-IAT will be administered online, via a hyperlink to the virtual laboratory offered by Project Implicit. The MTCS and demographic questionnaire will be administered via Qualtrics. Teachers will be given instructions on how to access each measure and will be encouraged to complete the measures during their planning class period. The Race-IAT and the MTCS should take about 10-15 minutes the complete. At the end of the school year, the district will provide the researcher with school-level disciplinary data report that includes the number and

type of office disciplinary referrals that were written for the school year. Teacher and student names will be coded on all data to provide anonymity.

Proposed Analysis

Descriptive Statistics. The frequency and mean rates of subjective ODRs, total and per category, will be calculated and reported. Additionally, mean scores and standard deviations for Race-IAT and MTCS will be calculated and reported.

Regression Analysis. To assess the main effects of racial implicit bias on disproportionality in school discipline, teachers' RDR estimates will be regressed on their Race-IAT scores, controlling for teacher's self-reported race and years of experience. Pending a significant effect, scores on teachers' MTCS will be included in the regression model. In model three, an interaction term between teachers' Race-IAT and MTCS scores will be added to test for the interaction effects between racial implicit bias and cultural competency on RDR values, controlling for teachers' self-reported race and years of experience. The following equations will be used:

$$RDR = \beta_0 + \beta_1 Race + \beta_2 YrsExp1 + \beta_3 YrsExp2 + \beta_4 IAT + e$$

$$RDR = \beta_0 + \beta_1 Race + \beta_2 YrsExp1 + \beta_3 YrsExp2 + \beta_4 IAT + \beta_5 MTCS + e$$

$$RDR = \beta_0 + \beta_1 Race + \beta_2 YrsExp1 + \beta_3 YrsExp2 + \beta_4 IAT + \beta_5 MTCS + \beta_6 (IAT \times MTCS) + e$$

Race-IAT and MTCS scores are continuous variables, with MTCS scores ranging from 16 to 96. Race is a categorical variable and will be dummy-coded (0= Black, 1 = Other races); Black teachers will serve as the reference group, since they constitute the majority of the teachers in HISD middle schools. Years of experience is also a categorical variable, representing the three categories reported on the HISD district summary: 5 years

or less (reference group), 6-10 years, and 11 or more years. Dummy-coding will involve entering two variables into the regression analysis. Scatter plots of the residuals will be examined to assess the assumptions of linearity, independence of errors, and homoscedasticity. The assumption of normality of errors will be visually assessed using q-q plots.

Power Analysis

A power analysis was conducted using G*Power 3.1.9.4 (Faul, Erdfelder, Lang, & Buchner, 2007) to determine the sample size needed. Since the relationship between implicit bias and the administration of office disciplinary referrals has not been explicitly studied, the effect size in this study was determined based on meta-analyses assessing the relationship between IAT scores and explicit measures of behavior ($\rho = 0.24$-0.26; Hofmann et al., 2005). To minimize the probability of Type I error, an α level of 0.025 will be used. Based on the parameters described above, in order to detect a "small" change in r2 value (f2 = .02) with 80% power, a sample of 651 teachers will be required. Accounting for the possibility of a minimum of a 30% attrition rate, all the teachers from at least 19 middle schools will be solicited for participation in this study (total $N \cong 950$).

Conclusion

Expected Results

The first research question evaluated the extent to which teachers' implicit bias predicts racial disproportionality in the administration of subjective office disciplinary referrals. After controlling for the race of the teacher and their years of teaching

experience, the author expects that race-IAT scores will be significantly associated with RDR estimates. Evaluation of the standardized regression coefficients should demonstrate that increasing race-IAT effect score will result in a decrease in RDR estimates. The second research question is interested in assessing the extent to which cultural competence moderates the effect of implicit bias on the racially disproportionate administration of subjective office disciplinary referrals. The researcher anticipates that cultural competence will also demonstrate a positive, significant relationship with RDR estimates, such that an increase in cultural competence will represent a decrease in RDR estimates. However, it is expected that the interaction term will account for most of the explained variance in the final regression model, demonstrating that race-IAT will have a smaller effect on RDR estimates when teachers report higher cultural competency and vice versa.

The following explanations address why the expected results might not be demonstrated within this study. First, the findings of this study will be invalid if the assumptions of multiple regression are not supported by the data. In this instance, the researcher would consider utilizing different analytic methods, such as logistic regression.

Limitations

There are important limitations to consider that may impact the intended results of this study. Beginning with the limitations associated with the measures utilized in this study, the race-IAT has demonstrated poor stability over time, which has led some to question whether it is an accurate measure of implicit bias. Additionally, a self-report

measure of cultural competence will be used for analysis. While the MTCS has been found to not be associated with social desirability (Spanierman et al., 2011), the validity of these scores is predicated on the hope that teachers are accurate self-reporters of their cultural competence. Future studies would consider utilizing multiple sources of information, such as parent- and student-reports or classroom observation scales, to construct a latent variable representing teachers' cultural competency.

Another limitation of this study is that the analyses do not control for any school-level variables. Sampling procedures attempted to account for any differences in principal attitudes and patterns of disproportionality by proposing only to include schools with a history of racial disproportionality in school discipline and with a principal interested in addressing this concern. However, future studies might consider controlling for potentially relevant school-level variables, such as principal attitudes towards discipline or a rating of school-level cultural competence.

Finally, the generalizability of this study is impacted by a few factors. Findings from this study should not be used to understand patterns of office disciplinary referrals for schools or districts that differ from the demographic profile of the students and teachers in the proposed sample. Additionally, the results of these analyses might look different in schools with principals that have not demonstrated an interest in addressing racial disproportionality in their school disciplinary practices. Also, the dependent variable in this study focused on racial disproportionality in subjective ODRs. Therefore, the findings from this study will not inform the ways implicit bias and cultural competence impact patterns of racial disproportionality in objective ODRs.

Implications

The expected findings from this study have important implications for educational practices and policies. First, this study contributes to the theoretical conversations about the relationship between implicit bias and racial disproportionality by empirically investigating the relationship between implicit bias and racial disproportionality in school disciplinary practices. As a note, this study does not intend to undermine the conceptual arguments supporting implicit bias as a predictor of racial disproportionality. Rather, findings from this study intends to strengthen this discourse with data. Data-based decision-making is a core tenet of many educational practices. Moreover, many policy and funding decisions rest upon the ability to quantify the existence of, and the change in, a problem. Therefore, if implicit bias is truly a significant predictor of racial disproportionality in subjective ODRs, it is critically important to be able to document this problem so that it might be addressed appropriately by educational policymakers and administrators.

Also, incorporating the effects of cultural competency into the understanding the relationship between implicit bias and patterns of referrals in subjective ODRs provides a concrete avenue for possible intervention. There are mixed findings on the malleability of implicit bias. However, studies have demonstrated that effective education and training can improve teachers' cultural competence. Therefore, if teachers' self-reported cultural competence is found to moderate the effects of implicit bias on teacher disciplinary decision-making, then a reasonable hypothesis would be that interventions proven to improve cultural competence would reduce the effect of implicit bias on teachers'

subjective ODR rate. Therefore, the results of this study could have important implications for future intervention research targeting disproportionality in ODRs.

Appendices

Appendix A

Table 1. Review of Commonly Studied Student-Level Predictors of Racial Disproportionality in School Discipline

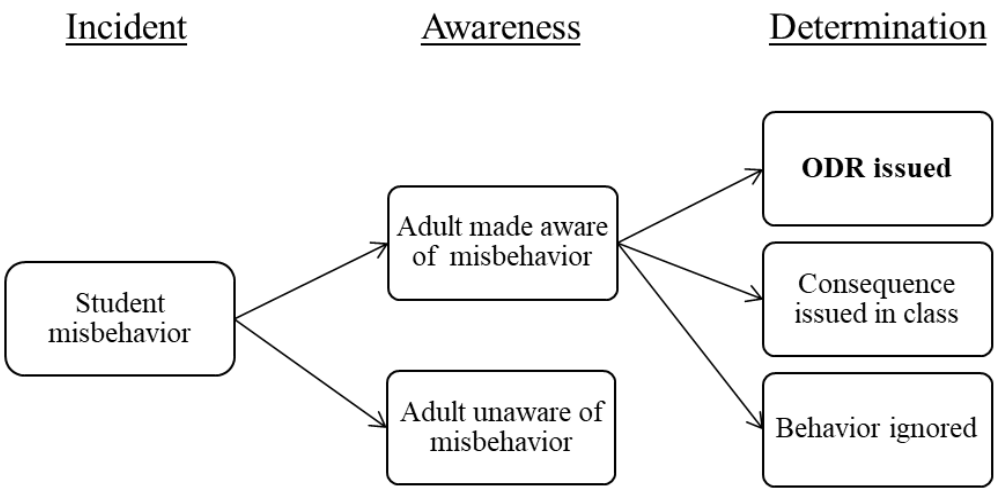
Researcher(s), Year ***Sample Description***	**Student-Level Predictors Studied**				**Conclusion**
	Gender	**SES**	**Behavior**	**SPED**	
Huang, 2018 *NELS data* *25,000 8th gr. students* *815 public, 237 private schools*	x		x		Patterns of misbehavior differed based on race, but rates of misbehavior did not show Black students. Misbehavior and deviant attitudes significantly predicted receipt of OSS. Race persisted as one of the strongest predictors of OSS, after controlling for demographics, misbehavior, and attitudes.
Cholewa, et al., 2017 *HSLS data, 2011-12* *2,993,918 students* *11,860 public high schools*	x	x		x	Race, gender, SES, and SPED were significant predictors of ISS, controlling for all other student and school level variables Gender was the most significant predictor of ISS, with boys having odds 2.03 times that of girls
Mizel et al., 2016 *Longitudinal study* *2,539 high school students* *16 schools, 3 districts*	x	x	x		Boys and students with parents reporting lower education levels were more likely to receive referral, suspension, or expulsion; inclusion of covariates reduced this disproportionality. Black students more likely to be suspended or expelled, controlling for delinquency and academic engagement variables.
Skiba, et al., 2014 *126,310 students who received ISS, OSS, or expulsion* *All public schools in Midwestern state*	x	x	x		Race significantly predicted OSS, regardless of behavior severity School-wide percentage of Black enrollment among strongest predictors of OSS and expulsion Student-level and school-wide measures of SES inconsistent in predicting OSS and expulsion
Fabelo et al., 2011 *Longitudinal data, from*	x	x		x	Compared to otherwise similar White and Hispanic peers, Black students were 31% more likely to receive exclusionary

1999-2009 *928,940 students, gr. 7-12* *Schools & juvenile justice in Texas*					discipline, controlling for 83 different variables Students receiving SPED for emotional disturbance were 23.9% more likely to be suspended or expelled, controlling for 83 different variables
Rocque, 2010 *2005-06 data* *28,634 students* *45 elementary schools in Virginia county*	x	x	x	x	Gender, SES, & SPED significantly related to receipt of ODR Black students (*OR* = 2.47) and males (*OR* = 3.08) were more likely to receive ODRs than other racial groups, when controlling for individual level variables
Bradshaw, et al., 2010 *SWIS data & teacher report* *6,988 students* *21 schools*			x		Black students were at increased odds of receiving an ODR, controlling for classroom and teacher level variables
Wallace, et al., 2008	x	x			Black boys reported the highest percentage of suspension or expulsion. Black girls were more likely to be suspended or expelled than White boys. Controlling for family structure, parental education, urbanicity, and region, Black, Hispanic, and Native American students were more likely to be sent to office, detained, suspended, or expelled.
Hinojosa, 2008 1997 data 19,000 6th & 8th gr students Midwest school district	x	x	x		Black students were 249 and 127 percent more likely to receive OSS or ISS, when controlling for an SES proxy, gender, behavior, and other variables
Skiba et al., 2002	x	x			Differences in ODR and suspensions explained by differences in misbehavior between boys and girls. Black boys more likely to receive referral than White boys, Black girls, and White girls. Controlling for SES minimally adjusted the effect size of race and race x gender interaction on ODR, suspensions and expulsions.

Note. SES = Socioeconomic status; SPED = Special Education eligibility; HSLS = High School Longitudinal Study; NELS = National Educational Longitudinal Study; OSS = out-of-school suspension; ISS = in-school suspension; ODR = office disciplinary referrals; *OR* = odds ratio.

Appendix B

Figure 1. Behavioral Chain for Office Disciplinary Referrals



Note. Adapted from McIntosh, Campbell, Carter, & Zumbo, 2009.

References

Anyon, Y., Lechuga, C., Ortega, D., Downing, B., Greer, E., & Simmons, J. (2018). An exploration of the relationships between student racial background and the school sub-contexts of office discipline referrals: A critical race theory analysis. *Race Ethnicity and Education*, *21*(3), 390–406. https://doi.org/10.1080/13613324.2017.1328594

Aud, S., Fox, M., and KewalRamani, A. (2010). Status and Trends in the Education of Racial and Ethnic Groups (NCES 2010-015). U.S. Department of Education, National Center for Education Statistics. Washington, DC: U.S. Government Printing Office

Bar-Anan, Y., & Nosek, B. A. (2014). A comparative investigation of seven indirect attitude measures. *Behavior Research Methods*, *46*(3), 668–688. https://doi.org/10.3758/s13428-013-0410-6

Baston, R., & Vosgerau, G. (2016). Implicit attitudes and implicit prejudices. *Philosophical Psychology*, *29*(6), 889–903. https://doi.org/10.1080/09515089.2016.1181260

Bohrnstedt, G., Kitmitto, S., Ogut, B., Sherman, D., and Chan, D. (2015). School Composition and the Black–White Achievement Gap (NCES 2015-018). U.S. Department of Education, Washington, DC: National Center for Education Statistics. Retrieved [2020] from http://nces.ed.gov/pubsearch.

Bollmer, J., Bethel, J., Garrison-Mogren, R., & Brauen, M. (2007). Using the Risk Ratio to Assess Racial/Ethnic Disproportionality in Special Education at the School-

District Level. *The Journal of Special Education*, *41*(3), 186–198. https://doi.org/10.1177/00224669070410030401

Bollmer, J. M., Bethel, J. W., Munk, T. E., & Bitterman, A. R. (2014). *Methods for Assessing Racial/Ethnic Disproportionality in Special Education A Technical Assistance Guide (Revised)*. 88.

Boneshefski, M. J., & Runge, T. J. (2014). Addressing Disproportionate Discipline Practices Within a School-Wide Positive Behavioral Interventions and Supports Framework: A Practical Guide for Calculating and Using Disproportionality Rates. *Journal of Positive Behavior Interventions*, *16*(3), 149–158. https://doi.org/10.1177/1098300713484064

Bonilla-Silva, E. (2015). The structure of racism in color-blind, "post-racial" America. *American Behavioral Scientist, 59*(11), 1358-1376.

Bradshaw, C. P., Mitchell, M. M., O'Brennan, L. M., & Leaf, P. J. (2010). *Multilevel Exploration of Factors Contributing to the Overrepresentation of Black Students in Office Disciplinary Referrals*. https://doi.org/10.1037/a0018450

Brown, D. F. (2004). Urban teachers' professed classroom management strategies: Reflections of culturally responsive teaching. *Urban Education*, 266289.

Brown v. Board of Educ., 347 U.S. 483 (1954).

Carter, P. L., Skiba, R., Arredondo, M. I., & Pollock, M. (2017). You Can't Fix What You Don't Look At: Acknowledging Race in Addressing Racial Discipline Disparities. *Urban Education*, *52*(2), 207–235. https://doi.org/10.1177/0042085916660350

Cholewa, B., Hull, M. F., Babcock, C. R., & Smith, A. D. (2018). Predictors and academic outcomes associated with in-school suspension. *School Psychology Quarterly*, *33*(2), 191–199. https://doi.org/10.1037/spq0000213

de Brey, C., Musu, L., McFarland, J., Wilkinson-Flicker, S., Diliberti, M., Zhang, A., Branstetter, C., and Wang, X. (2019). Status and Trends in the Education of Racial and Ethnic Groups 2018 (NCES 2019-038). U.S. Department of Education. Washington, DC: National Center for Education Statistics. Retrieved [date] from https://nces.ed.gov/ pubsearch/.

Faul, F., Erdfelder, E., Lang, A.-G. & Buchner, A. (2007). G*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods*, 39, 175-191.

Fazio, R. H., & Olson, M. A. (2003). Implicit Measures in Social Cognition Research: Their Meaning and Use. *Annual Review of Psychology*, *54*(1), 297–327. https://doi.org/10.1146/annurev.psych.54.101601.145225

Freeman, J., Simonsen, B., McCoach, D. B., Sugai, G., Lombardi, A., & Horner, R. (2016). Relationship Between School-Wide Positive Behavior Interventions and Supports and Academic, Attendance, and Behavior Outcomes in High Schools. *Journal of Positive Behavior Interventions*, *18*(1), 41–51. https://doi.org/10.1177/1098300715580992

Gawronski, B., & Bodenhausen, G. V. (2017). Beyond Persons and Situations: An Interactionist Approach to Understanding Implicit Bias. *Psychological Inquiry*, *28*(4), 268–272. https://doi.org/10.1080/1047840X.2017.1373546

Gawronski, B., LeBel, E. P., & Peters, K. R. (2007). What Do Implicit Measures Tell Us?: Scrutinizing the Validity of Three Common Assumptions. *Perspectives on Psychological Science*, *2*(2), 181–193. https://doi.org/10.1111/j.1745-6916.2007.00036.x

Gay, G. (2002). Preparing for culturally responsive teaching. *Journal of Teacher Education*, *53*(2), 106–116.

Girvan, E. J., Gion, C., McIntosh, K., & Smolkowski, K. (2017). The relative contribution of subjective office referrals to racial disproportionality in school discipline. *School Psychology Quarterly*, *32*(3), 392–404. https://doi.org/10.1037/spq0000178

Girvan, E. J., McIntosh, K., & Smolkowski, K. (2019). Tail, Tusk, and Trunk: What Different Metrics Reveal About Racial Disproportionality in School Discipline. *Educational Psychologist*, *54*(1), 40–59. https://doi.org/10.1080/00461520.2018.1537125

Greenwald, A. G., Banaji, M. R., & Nosek, B. A. (2015). Statistically Small Effects of the Implicit Association Test Can Have Societally Large Effects. *Journal of Personality and Social Psychology*, *108*, 553–561.

Greenwald, A. G., McGhee, D. E., & Schwartz, J. L. K. (1998). Measuring Individual Differences in Implicit Cognition: The Implicit Association Test. *Journal of Personality and Social Psychology*, *74*(6), 1464–1480.

Greenwald, A. G., Poehlman, T. A., Uhlmann, E. L., & Banaji, M. R. (2009). Understanding and Using the Implicit Association Test: III. Meta-Analysis of Predictive Validity. *Journal of Personality and Social Psychology*, *97*(1), 17–41.

Gregory, A., Skiba, R. J., & Noguera, P. A. (2010). The Achievement Gap and the Discipline Gap: Two Sides of the Same Coin? *Educational Researcher*, *39*(1), 59–68. https://doi.org/10.3102/0013189X09357621

Heider, J. D., & Skowronski, J. J. (2007). Improving the Predictive Validity of the Implicit Association Test. *North American Journal of Psychology; Winter Garden*, *9*(1), 53–76.

Hinojosa, M. S. (2008). Black-White Differences in School Suspension: Effect of Student Beliefs About Teachers. *Sociological Spectrum*, *28*(2), 175–193. https://doi.org/10.1080/02732170701796429

Hofmann, W., Gawronski, B., Gschwendner, T., Le, H., & Schmitt, M. (2005). A Meta-Analysis on the Correlation Between the Implicit Association Test and Explicit Self-Report Measures. *Personality and Social Psychology Bulletin*, *31*(10), 1369–1385. https://doi.org/10.1177/0146167205275613

Howard, T. C. (2003). Culturally Relevant Pedagogy: Ingredients for Critical Teacher Reflection. *Theory into Practice*, *42*(3), 195–202.

Huang, F. L. (2018). Do Black students misbehave more? Investigating the differential involvement hypothesis and out-of-school suspensions. *The Journal of Educational Research*, *111*(3), 284–294. https://doi.org/10.1080/00220671.2016.1253538

Irvin, L. K., Tobin, T. J., Sprague, J. R., Sugai, G., & Vincent, C. G. (2004). Validity of Office Discipline Referral Measures as Indices of School-Wide Behavioral Status and Effects of School-Wide Behavioral Interventions. *Journal of Positive Behavior Interventions*, *6*(3), 131–147. https://doi.org/10.1177/10983007040060030201

Klingner, J. K., Artiles, A. J., Kozleski, E., Harry, B., Zion, S., Tate, W., Durán, G. Z., & Riley, D. (2005). Addressing the Disproportionate Representation of Culturally and Linguistically Diverse Students in Special Education through Culturally Responsive Educational Systems. *Education Policy Analysis Archives*, *13*(0), 38. https://doi.org/10.14507/epaa.v13n38.2005

Kozleski, E. (2005). *The Disproportionate Representation of Culturally and Linguistically Diverse Students in Special Education*. 8.

Kunesh, A., & Noltemeyer, C. E. (2015). Understanding Disciplinary Disproportionality: Stereotypes Shape Pre-Service Teachers' Beliefs About Black Boys' Behavior - Claire E. Kunesh, Amity Noltemeyer, 2019. *Urban Education*. http://journals.sagepub.com/doi/full/10.1177/0042085915623337

Ladson-Billings, G. (1995a). But that's just good teaching! The case for culturally relevant pedagogy. *Theory Into Practice*, *34*(3), 159–165.

Ladson-Billings, G. (1995b). Toward a Theory of Culturally Relevant Pedagogy. *American Educational Research Journal*, *32*(3), 465–491. JSTOR. https://doi.org/10.2307/1163320

Ladson-Billings, G. (2014). Culturally Relevant Pedagogy 2.0: A.k.a. the Remix. *Harvard Educational Review*, *84*(1), 74–84. https://doi.org/10.17763/haer.84.1.p2rj131485484751

Lindsay, C. A., & Hart, C. M. D. (2017). Exposure to Same-Race Teachers and Student Disciplinary Outcomes for Black Students in North Carolina. *Educational Evaluation and Policy Analysis*, *39*(3), 485–510. https://doi.org/10.3102/0162373717693109

Losen, D., & Skiba, R. (2010). *Suspended Education: Urban middle schools in crisis*. Southern Poverty Law Center. https://civilrightsproject.ucla.edu/research/k-12-education/school-discipline/suspended-education-urban-middle-schools-in-crisis/Suspended-Education_FINAL-2.pdf

Maass, A., Castelli, L., & Arcuri, L. (2000). Measuring prejudice: Implicit versus explicit techniques. In D. Capozza & R. Brown (Eds.), *Social identity processes: Trends in theory and research* (p. 96–116). Sage Publications Ltd. https://doi.org/10.4135/9781446218617.n7

Mahatmya, D., Lohman, B. J., Brown, E. L., & Conway-Turner, J. (2016). The role of race and teachers' cultural awareness in predicting low-income, Black and Hispanic students' perceptions of educational attainment. *Social Psychology of Education*, *19*(2), 427–449. https://doi.org/10.1007/s11218-016-9334-1

Mcintosh, K., Campbell, A. L., Carter, D. R., & Zumbo, B. D. (2009). Concurrent Validity of Office Discipline Referrals and Cut Points Used in Schoolwide

Positive Behavior Support. *Behavioral Disorders*, *34*(2), 100–113. https://doi.org/10.1177/019874290903400204

McIntosh, K., Girvan, E. J., Horner, R., & Smolkowski, K. (2014). *Education not Incarceration: A Conceptual Model for Reducing Racial and Ethnic Disproportionality in School Discipline* (SSRN Scholarly Paper ID 2598212). Social Science Research Network. https://papers.ssrn.com/abstract=2598212

McKenney, E. L. W., Mann, K. A., Brown, D. L., & Jewell, J. D. (2017). Addressing cultural responsiveness in consultation: An empirical demonstration. *Journal of Educational & Psychological Consultation*, *27*(3), 289–316. https://doi.org/10.1080/10474412.2017.1287575

Milner, H. R., & Ford, D. Y. (2007). Cultural considerations in the underrepresentation of culturally diverse elementary students in gifted education. *Roeper Review: A Journal on Gifted Education*, *29*(3), 166–173. https://doi.org/10.1080/02783190709554405

Mizel, M. L., Miles, J. N. V., Pedersen, E. R., Tucker, J. S., Ewing, B. A., & D'Amico, E. J. (2016). To educate or to incarcerate: Factors in disproportionality in school discipline. *Children and Youth Services Review*, *70*, 102–111. https://doi.org/10.1016/j.childyouth.2016.09.009

Monroe, C. R. (2005). Why Are "Bad Boys" always Black?: Causes of Disproportionality in School Discipline and Recommendations for Change. *The Clearing House: A Journal of Educational Strategies, Issues and Ideas*, *79*(1), 45–50. https://doi.org/10.3200/TCHS.79.1.45-50

National Assessment of Educational Progress [NAEP]. (2012). The Nation's Report Card: Long-Term Trend Summary of Findings. U.S. Department of Education, National Center for Education Statistics. Retrieved [2020] from https://www.nationsreportcard.gov/ltt_2012/summary.aspx

Nicholson-Crotty, S., Birchmeier, Z., & Valentine, D. (2009). Exploring the Impact of School Discipline on Racial Disproportion in the Juvenile Justice System*. *Social Science Quarterly*, *90*(4), 1003–1018. https://doi.org/10.1111/j.1540-6237.2009.00674.x

Nishioka, V. (with Shigeoka, S., & Lolich, E.). (2017). *School discipline data indicators: A guide for districts and schools. REL 2017-240*. Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Northwest. Retrieved from https://eric.ed.gov/?id=ED573680

Office Referrals. (2014). In W. G. Scarlett, *The SAGE Encyclopedia of Classroom Management* (pp. 560–561). SAGE Publications Inc. https://doi.org/10.4135/9781483346243.n230

Okonofua, J. A., Walton, G. M., & Eberhardt, J. L. (2016). A Vicious Cycle: A Social–Psychological Account of Extreme Racial Disparities in School Discipline. *Perspectives on Psychological Science*, *11*(3), 381–398. https://doi.org/10.1177/1745691616635592

Oliver, R. M., & Reschly, D. J. (2007). *Effective Classroom Management: Teacher Preparation and Professional Development*. 1–24.

Paris, D. (2012). Culturally sustaining pedagogy: A needed change in stance, terminology, and practice. *Educational Researcher*, *41*(3), 93–97.

Pas, E. T., Bradshaw, C. P., & Mitchell, M. M. (2011). Examining the validity of office discipline referrals as an indicator of student behavior problems. *Psychology in the Schools*, *48*(6), 541–555. https://doi.org/10.1002/pits.20577

Pas, E. T., Larson, K. E., Reinke, W. M., Herman, K. C., & Bradshaw, C. P. (2016). Implementation and Acceptability of an Adapted Classroom Check-Up Coaching Model to Promote Culturally Responsive Classroom Management. *Education and Treatment of Children*, *39*(4), 467–491. https://doi.org/10.1353/etc.2016.0021

Payne, B. K., Vuletich, H. A., & Brown-Iannuzzi, J. L. (2019). Historical roots of implicit bias in slavery. *Proceedings of the National Academy of Sciences*, *116*(24), 11693–11698. https://doi.org/10.1073/pnas.1818816116

Pesta, R. (2018). Labeling and the Differential Impact of School Discipline on Negative Life Outcomes: Assessing Ethno-Racial Variation in the School-to-Prison Pipeline. *Crime & Delinquency*, *64*(11), 1489–1512. https://doi.org/10.1177/0011128717749223

Ponterotto, J. G., Baluch, S., Greig, T., & Rivera, L. (1998). Development and initial score validation of the Teacher Multicultural Altitude Survey. *Educational and Psychological Measurement*, *58*(6), 1002–1016. https://doi.org/10.1177/0013164498058006009

Predy, L., McIntosh, K., Frank, J. L., & Flitchcock, J. (2014). Utility of Number and Type of Office Discipline Referrals in Predicting Chronic Problem Behavior in

Middle Schools. *School Psychology Review*, *43*(4), 472–489. https://doi.org/10.17105/SPR-13-0043.1

Rudd, T. (2014). *Implicit Bias is Heavily Implicated* (pp. 1–8). Kirwan Institute for the Study of Race and Ethnicity. http://kirwaninstitute.osu.edu/

Rudman, L. A. (2004). Sources of Implicit Attitudes. *Current Directions in Psychological Science*, *13*(2), 79–82. https://doi.org/10.1111/j.0963-7214.2004.00279.x

Shealey, M. W., McHatton, P. A., & Wilson, V. (2011). Moving beyond disproportionality: The role of culturally responsive teaching in special education. *Teaching Education*, *22*(4), 377–396. https://doi.org/10.1080/10476210.2011.591376

Simonsen, B., Eber, L., Black, A. C., Sugai, G., Lewandowski, H., Sims, B., & Myers, D. (2012). Illinois Statewide Positive Behavioral Interventions and Supports: Evolution and Impact on Student Outcomes Across Years. *Journal of Positive Behavior Interventions*, *14*(1), 5–16. https://doi.org/10.1177/1098300711412601

Skiba, R. J., Chung, C.-G., Trachok, M., Baker, T. L., Sheya, A., & Hughes, R. L. (2014). Parsing Disciplinary Disproportionality: Contributions of Infraction, Student, and School Characteristics to Out-of-School Suspension and Expulsion. *American Educational Research Journal*, *51*(4), 640–670. https://doi.org/10.3102/0002831214541670

Skiba, R. J., Horner, R. H., Chung, C.-G., Rausch, M. K., May, S. L., & Tobin, T. (2011). Race Is Not Neutral: A National Investigation of African American and Latino Disproportionality in School Discipline. *School Psychology Review*, *40*(1), 24.

Skiba, R. J., Michael, R. S., Nardo, A. C., & Peterson, R. L. (2002). The Color of Discipline: Sources of Racial and Gender Disproportionality in School Punishment. *The Urban Review*, *34*(4), 317–342. https://doi.org/10.1023/A:1021320817372

Smolkowski, K., Girvan, E. J., McIntosh, K., Nese, R. N. T., & Horner, R. H. (2016). Vulnerable Decision Points for Disproportionate Office Discipline Referrals: Comparisons of Discipline for African American and White Elementary School Students. *Behavioral Disorders*, *41*(4), 178–195.

Spanierman, L. B., Oh, E., Heppner, P. P., Neville, H. A., Mobley, M., Wright, C. V., Dillon, F. R., & Navarro, R. (2011). The Multicultural Teaching Competency Scale: Development and Initial Validation. *Urban Education*, *46*(3), 440–464. https://doi.org/10.1177/0042085910377442

Staats, C. (2016). Understanding Implicit Bias: What Educators Should Know. *American Educator*, *39*(4), 29.

Sue, D. W., Arredondo, P., & McDAVIS, R. J. (1992). *Multicultural Counseling Competencies and Standards: A Call to the Profession*. *70*, 10.

Sugai, G., O'Keeffe, B. V., & Fallon, L. M. (2012). A contextual consideration of culture and school-wide positive behavior support. *Journal of Positive Behavior Interventions*, *14*(4), 197–208. https://doi.org/10.1177/1098300711426334

Sugai, G., Sprague, J. R., Horner, R. H., & Walker, H. M. (2000). Preventing School Violence: The Use of Office Discipline Referrals to Assess and Monitor School-Wide Discipline Interventions. *Journal of Emotional and Behavioral Disorders*, *8*(2), 94–101. https://doi.org/10.1177/106342660000800205

Townsend, B. L. (2000). The Disproportionate Discipline of African American Learners: Reducing School Suspensions and Expulsions. *Exceptional Children*, *66*(3), 381–391. https://doi.org/10.1177/001440290006600308

Tobin, T. J., & Vincent, C. G. (2011). Strategies for Preventing Disproportionate Exclusions of African American Students. *Preventing School Failure: Alternative Education for Children and Youth*, *55*(4), 192–201. https://doi.org/10.1080/1045988X.2010.532520

U.S. Department of Education Office for Civil Rights. (2014). Civil Rights Data Collection: Data Snapshot (School Discipline 2011-12). U.S. Department of Education, Office for Civil Rights.

Vincent, C. G., & Tobin, T. J. (2011). The Relationship Between Implementation of School-Wide Positive Behavior Support (SWPBS) and Disciplinary Exclusion of Students From Various Ethnic Backgrounds With and Without Disabilities—Claudia G. Vincent, Tary J. Tobin, 2011. *Journal of Emotional and Behavioral Disorders*. http://journals.sagepub.com/doi/10.1177/1063426610377329

Wallace, J. M., Goodkind, S., Wallace, C. M., & Bachman, J. G. (2008). Racial, Ethnic, and Gender Differences in School Discipline among U.S. High School Students: 1991-2005. *The Negro Educational Review*, *59*(1–2), 47–62.

Weinstein, C. S., Tomlinson-Clarke, S., & Curran, M. (2004). Toward a Conception of Culturally Responsive Classroom Management. *Journal of Teacher Education*, *55*(1), 25–38. https://doi.org/10.1177/0022487103259812

Worrell, F. C. (2015). Culture as Race/Ethnicity. *The Oxford Handbook of Identity Development*. https://doi.org/10.1093/oxfordhb/9780199936564.013.029